

CREDIT EXEMPTION

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Conditions for credit exemption are as follow:

- Subjects to be applied for credit exemption must have the same content or at least not less than 80% with the subject offered by the University;
- The grade or grade point obtained in the said subject should not be less than C₊ and
- The total credit hours to be exempted must not exceed 50% of the total credits for graduation.

Application for credit exemption must be submitted to the faculty within (10) weeks after registration as a student.

CREDIT TRANSFER

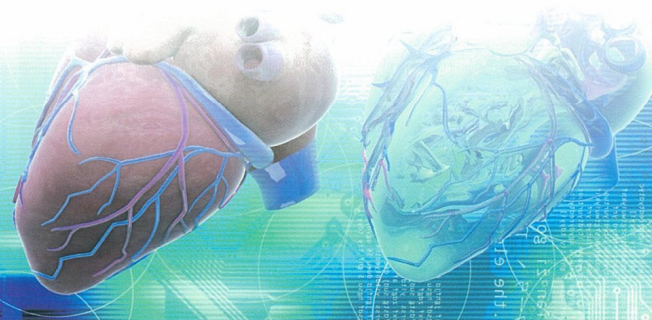
Credit transfer (CT) is for subjects taken by a student at other institute of Higher Learning after his admission to the first degree program at UTM as approved by the Faculty.

In case of credit transfer, all credits obtained from the Institute of Higher Learning at which the student has undertaken the study, together with their grades and grade point, will be taken into account in the GPA and CPA computation subject to the condition that a student is not allowed to transfer more than a third (1/3) or the total number of credits for graduation but not more than one semester of study for any Higher Learning.

CREDIT EARNED

Credits Earned is the total number of credits for which a student has passed including subjects with HW (Compulsory Attendance) which have a credit value. It is closely related to the Credits for Course Graduation. Credits for subjects registered with the HS (Attendance Only) will not be taken into account in computing Credits Earned. Credit Earned is computed for each semester and for all semesters. For students with credit transfer, the credits will be added to the passed subjects credits in order to determine the overall Credit Earned.

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Inspiring Creative And Innovative Minds



further information

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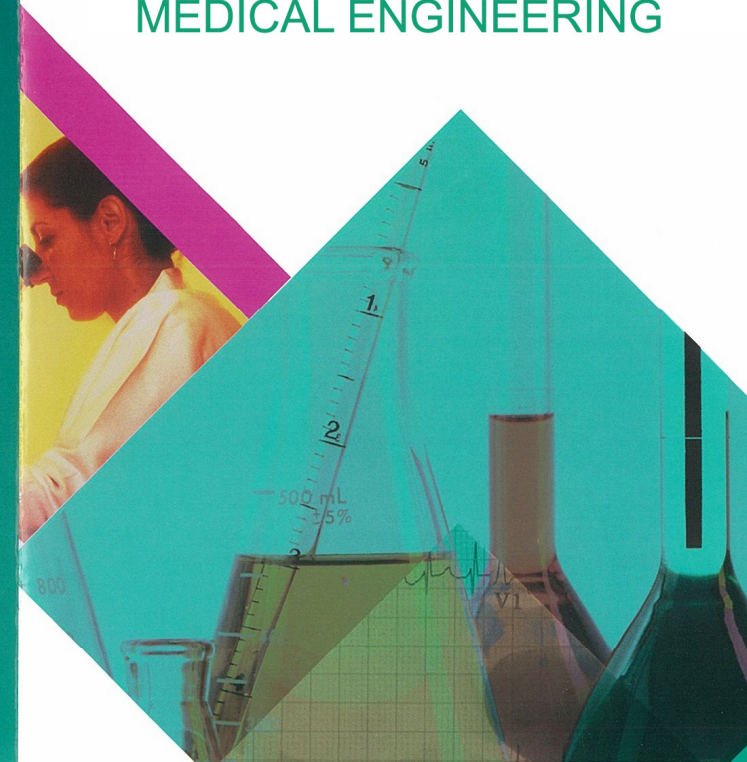
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UNIVERSITI PENYELIDIKAN

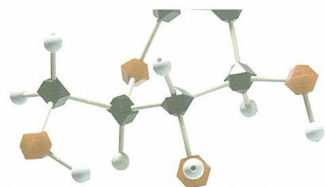
FACULTY OF BIOSCIENCES AND MEDICAL ENGINEERING



Faculty of Biosciences and Medical Engineering (FBME), is a newly established faculty in UTM to champion the teachings and research in biomedical sciences and engineering. The faculty offers innovative Biomedical Engineering programme for both undergraduate and postgraduates with a special emphasis on clinical and industrial applications. We believe strongly in the value of interdisciplinary pursuits in this emerging field where engineering techniques and technologies from various disciplines are used to address needs within the medical and healthcare industries.

Established in August 2007 in the UTM main campus, Johor Bahru, the faculty is supported by four departments which are the Department of Biomedical Instrumentation & Signal Processing, Department of Biomechanics and Biomedical Materials, Department of Therapy and Rehabilitation as well as Department of Clinical Science and Engineering.





Programme Offeres-Faculty Of Biosciences And Medical Engineering

INTRODUCTION

Application of engineering technique in Biomedical sciences is gradually expanding. Today, with the increasing complexity of medical technology, there is a growing demand for technical professionals that could inter-relate the fields of bio-medical and engineering. Personnel that are capable of understanding a medical problem in terms of engineering sciences will be able to solve problems that are of interests to medical practitioners.

This new field of Biomedical Engineering has made significant contributions in the technological advancement in the field of medicine, such as the creation and production of artificial human parts, communication aids and assistive tools for the disabled, new diagnostics and therapeutic tools that lead to new medical procedures, etc. The use of equipment and devices in modern medicine is so prevalent that we cannot imagine a situation without it. It has even come to a stage where there are now medical devices for home use.

Beside that, the Government of Malaysia will be regulating the use & Medical Devices in the near future will put in place a more comprehensive and stringent set of regulations to ensure the safety of patients and personnel when using medical devices. Suppliers of medical equipment and healthcare centers/hospitals will be made to be more responsible when dealing with medical devices.

Devices will have to be properly maintained and calibrated in accordance with established regulations and standards. Relevant agency set by the Government to oversee the regulation will require qualified staff in this area. In addition, R&D in this field will have to be aggressively pursued if Malaysia does not want to be left behind. Therefore, there exists a need for qualified bio-medical engineering personnel to undertake the task mentioned above.

PROGRAMME STRUCTURE (SWB)

The number of credits required for graduates to be awarded the bachelor degree is 132. Allocations of total credits according to category of courses are as follows:

| Classification of Courses | Credit |
|----------------------------|------------|
| Core Courses | 110 |
| Electives | 6 |
| General University Courses | 8 |
| English Language | 6 |
| Co-curriculum | 2 |
| Total Credits | 132 |

The SWB programme is a mixed curriculum of engineering and Biomedical. The course content for 1st and 2nd year is more towards engineering subjects, such as Basic Electrical Engineering, Calculus and etc.

The 3rd year will see more core subjects from Biomedical Engineering such as Introduction to Biomedical Material, Biomedical Instrumentation & Measurement, and Biomedical. In the final year, students will be further reinforced in Biomedical Engineering through subjects like Medical Imaging, Biomedical Signal Processing, Biomedical Instrumentation & Measurement and Clinical Engineering. Students will also be required to choose elective courses in Biomedical Engineering which include topics like Rehabilitation Engineering, Radiobiology and Biomedical Informatics, Photonic in Medicine, Computer System & Multimedia, Artificial Intelligence and Machine Learning.

In addition to the above, students in the final year are required to complete a design project or research study in the area of Biomedical Engineering.

Students will also undergo a compulsory industrial attachment programme of at least 10 weeks, either in the private sector or government agencies, during the short semester in the 3rd year. This will give students an exposure of the working environment in the industry as well as to prepare them with practical knowledge of Biomedical Engineering for their final year design project.

CAREER PROSPECTS

Graduates of this course can find work opportunities in hospitals, companies involve in biomedical products/services, Ministry of Health Malaysia and any other party involved in healthcare the job opportunities available to the biomedical engineering graduates are:

- Government regulators to oversee the implementation of the Medical Devices Act when it is enacted
- Engineers in hospital or medical centers responsible for the procurement, maintenance and usage of medical devices
- Sales engineer in biomedical devices supply companies
- R & D engineers in biomedical engineering research facilities
- Engineers involve in maintaining, testing and commissioning biomedical devices Engineers involve in the manufacturing of medical devices
- Engineers in the Ministry of Health, Malaysia, responsible for the planning, management and operation of the engineering services of the public healthcare sector.

PROGRAMME ADMISSION REQUIREMENT

Student intake for the bachelor degree programme are divided into two groups that are first year admission and the direct entry admission to second and upper year.

Candidates must obtained a minimum of 30 credit transfer

Matriculation Programme, Ministry of Higher Education, Malaysia (MOHE)/ 'Sains Asasi' (UM)

University Entrance Requirement:

- Pass Sijil Pelajaran Malaysia (SPM) or equivalent with credit in Bahasa Melayu
- Pass Matriculation MOHE with PNGK of at least 2.00 and also pass all the specified subjects
- Sat For Malaysian University English Test (MUET)

Programme Entrance Requirement

- Pass Sijil Pelajaran Malaysia (SPM) level or equivalent with credit in Mathematics
- Pass Matriculation Program with at least 'B' (3.00) in Mathematics, Physics or biology and Chemistry.
- Candidate who fulfill the requirement in Biology at Matriculation Programme have to pass at least a '3B' in Physics at Sijil Pelajaran Malaysia.
- Not having any health problem which will prevent them from doing practical work.

University Entrance Requirement

- Pass Sijil Pelajaran Malaysia (SPM) or equivalent with good grades.
- Pass Sijil Pelajaran Malaysia (SPM) with credit in Bahasa Melayu / Bahasa Malaysia or equivalent.
- Sat for Malaysian University English Test (MUET)
- Pass STPM or equivalent at one time with at least:
 - i. Grade 'E' in General Studies / General Paper AND
 - ii. Grade 'E' in TWO other subjects

Programme Entrance Requirement

- Pass Sijil Pelajaran Malaysia (SPM) level or equivalent with credit in Mathematics
- Pass Sijil Pelajaran Malaysia (SPM) level or equivalent with at least grade 'C' in the the following subjects:
 - i. Additional Mathematics or Advance Mathematics
 - ii. Physics
 - iii. Chemistry
- Not having any health problem which will prevent them from doing practical work.

Programme Entrance Requirement

- Pass Sijil Pelajaran Malaysia (SPM) level or equivalent with credit in Mathematics
- Pass Sijil Pelajaran Malaysia (SPM) or equivalent with credit in Bahasa Melayu
- Satisfactorily taken Malaysian University English Test (MUET)
- Obtained a diploma in Electrical Engineering (Power / Communication / Electronics / Mechatronics) from UTM or Public Institute of Higher Learning (IPTA) or Private Institute of higher Learning (IPTS) or equivalent with CGPA of at least 2.70
- Holds other qualification deemed equivalent by the Government of Malaysia and approved by University Senate
- Not having any health problem which will prevent from doing practical work.

Subjects exemption will be given to direct entry students after registration according to the grade of the subjects obtained and the subjects are recognize by the Faculty. Actual year of entry and duration of study are subjected to credit exemption approved by university.

FIRST YEAR ADMISSION

STPM CANDIDATES ADMISSION REQUIREMENT

DIRECT ENTRY TO SECOND OR UPPER YEAR ADMISSION

